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SEQUENCE LISTING

<10> Bacher, Adelbert
Mortl, Simone

<120> METHOD FOR SCREENING FOR INHIBITORS OF THE BIOSYNTHESIS OF
RIBOFLAVIN

<130> 9286-9

<140> US 10/070,144

<141> 2002-03-01

<150> DE 199 42 175.7

<151> 1999-09-03

<160> 12

<170> PatentIn version 3.1

<210> 1

<211> 34

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide primer

<400> 1

ggagaaatta accatgaagt cattagcttc gccg

34

<210> 2

<211> 27

<212> DNA

<213> Artificial sequence

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<223> Synthetic oligonucleotide primer

<400> 2

tcattgtgat ccatggaacg agccgag

27

<210> 3

<211> 36

<212> DNA

<213> Artificial sequence

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<223> Synthetic oligonucleotide primer

<400> 3

caatttgat tcattaaaga ggagaaatta actatg

36

<210> 4

<211> 37

<212> DNA

<213> Artificial sequence

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 <223> Synthetic oligonucleotide primer

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 ggagaaatta accatgcatg ttacgggggtc tcttatc 37

<210> 5
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 <213> Artificial sequence

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 ataataatag cggccgctat gcatgttacg ggggtctctta tc 42

<210> 6
 <211> 699
 <212> DNA
 <213> Arabidopsis thaliana

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<222> (1)..(681)
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 atg aag tca tta gct tcg ccg ccg tgt ctc cgc ctg ata ccg acg gca 48
 Met Lys Ser Leu Ala Ser Pro Pro Cys Leu Arg Leu Ile Pro Thr Ala
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cac cgt cag ctc aat tcg cgt caa tct tcc tcc gcc tgt tat ata cac 96
 His Arg Gln Leu Asn Ser Arg Gln Ser Ser Ala Cys Tyr Ile His
 20 25 30

ggc ggc tct tct gtg aac aaa tcc aat aat ctc tca ttc tcc tca tcc 144
 Gly Gly Ser Ser Val Asn Lys Ser Asn Asn Leu Ser Phe Ser Ser Ser
 35 40 45

aca tcc gga ttt gcg tca cca cta gct gta gag aag gaa tta cgc tct 192
 Thr Ser Gly Phe Ala Ser Pro Leu Ala Val Glu Lys Glu Leu Arg Ser
 50 55 60

tca ttc gta cag acg gct gct gtt cgc cat gtt acg ggg tct ctt atc 240
 Ser Phe Val Gln Thr Ala Ala Val Arg His Val Thr Gly Ser Leu Ile
 65 70 75 80

aga ggc gaa ggt ctt aga ttc gcc atc gtg gta gct cgt ttc aat gag 288
 Arg Gly Glu Gly Leu Arg Phe Ala Ile Val Val Ala Arg Phe Asn Glu
 85 90 95

ggt gtg act aag ttg ctt ttg gaa gga gcg att gag act ttc aag aag 336
 Val Val Thr Lys Leu Leu Leu Glu Gly Ala Ile Glu Thr Phe Lys Lys
 100 105 110

tat tca gtc aga gaa gaa gac att gaa gtt att tgg gtt cct ggc agc 384

Tyr	Ser	Val	Arg	Glu	Glu	Asp	Ile	Glu	Val	Ile	Trp	Val	Pro	Gly	Ser		
		115					120					125					
ttt	gaa	att	ggg	gtt	gtt	gca	caa	aat	ctt	ggg	aaa	tcg	gga	aaa	ttt		432
Phe	Glu	Ile	Gly	Val	Val	Ala	Gln	Asn	Leu	Gly	Lys	Ser	Gly	Lys	Phe		
		130				135					140						
cat	gct	gtt	tta	tgt	atc	ggc	gct	gtg	ata	aga	gga	gat	acc	aca	cat		480
His	Ala	Val	Leu	Cys	Ile	Gly	Ala	Val	Ile	Arg	Gly	Asp	Thr	Thr	His		
		145			150					155					160		
tat	gat	gct	gtt	gcc	aac	tct	gct	gcg	tct	gga	gta	ctt	tct	gct	agc		528
Tyr	Asp	Ala	Val	Ala	Asn	Ser	Ala	Ala	Ser	Gly	Val	Leu	Ser	Ala	Ser		
				165					170					175			
ata	aat	tca	ggc	gtt	cca	tgc	ata	ttt	ggg	gta	ctg	act	tgc	gag	gac		576
Ile	Asn	Ser	Gly	Val	Pro	Cys	Ile	Phe	Gly	Val	Leu	Thr	Cys	Glu	Asp		
			180					185					190				
atg	gat	cag	gct	ctg	aat	cga	tct	ggg	ggc	aaa	gcc	ggc	aat	aag	gga		624
Met	Asp	Gln	Ala	Leu	Asn	Arg	Ser	Gly	Gly	Lys	Ala	Gly	Asn	Lys	Gly		
		195				200					205						
gct	gaa	act	gct	ttg	acg	gcg	ctc	gaa	atg	gcg	tcg	ttg	ttt	gag	cac		672
Ala	Glu	Thr	Ala	Leu	Thr	Ala	Leu	Glu	Met	Ala	Ser	Leu	Phe	Glu	His		
		210				215					220						
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His	Leu	Lys															
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			20				25						30				
Gly	Gly	Ser	Ser	Val	Asn	Lys	Ser	Asn	Asn	Leu	Ser	Phe	Ser	Ser	Ser		
		35				40						45					
Thr	Ser	Gly	Phe	Ala	Ser	Pro	Leu	Ala	Val	Glu	Lys	Glu	Leu	Arg	Ser		
	50					55					60						
Ser	Phe	Val	Gln	Thr	Ala	Ala	Val	Arg	His	Val	Thr	Gly	Ser	Leu	Ile		
65					70				75					80			
Arg	Gly	Glu	Gly	Leu	Arg	Phe	Ala	Ile	Val	Val	Ala	Arg	Phe	Asn	Glu		
				85					90					95			

Val Val Thr Lys Leu Leu Leu Glu Gly Ala Ile Glu Thr Phe Lys Lys
 100 105 110

Tyr Ser Val Arg Glu Glu Asp Ile Glu Val Ile Trp Val Pro Gly Ser
 115 120 125

Phe Glu Ile Gly Val Val Ala Gln Asn Leu Gly Lys Ser Gly Lys Phe
 130 135 140

His Ala Val Leu Cys Ile Gly Ala Val Ile Arg Gly Asp Thr Thr His
 145 150 155 160

Tyr Asp Ala Val Ala Asn Ser Ala Ala Ser Gly Val Leu Ser Ala Ser
 165 170 175

Ile Asn Ser Gly Val Pro Cys Ile Phe Gly Val Leu Thr Cys Glu Asp
 180 185 190

Met Asp Gln Ala Leu Asn Arg Ser Gly Gly Lys Ala Gly Asn Lys Gly
 195 200 205

Ala Glu Thr Ala Leu Thr Ala Leu Glu Met Ala Ser Leu Phe Glu His
 210 215 220

His Leu Lys
 225

<210> 8
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 <212> PRT
 <213> Arabidopsis thaliana

<400> 8

Met Lys Ser Leu Ala Ser Pro Pro Cys Leu Arg Leu Ile Pro Thr Ala
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His Arg Gln Leu Asn Ser Arg Gln Ser Ser Ser Ala Cys Tyr Ile His
 20 25 30

Gly Gly Ser Ser Val Asn Lys Ser Asn Asn Leu Ser Phe Ser Ser Ser
 35 40 45

Thr Ser Gly Phe Ala Ser Pro Leu Ala Val Glu Lys Glu Leu Arg Ser
 50 55 60

Ser Phe Val Gln Thr Ala Ala Val Arg His Val Thr Gly Ser Leu Ile
65 70 75 80

Arg Gly Glu Gly Leu Arg Phe Ala Ile Val Val Ala Arg Phe Asn Glu
85 90 95

Val Val Thr Lys Leu Leu Leu Glu Gly Ala Ile Glu Thr Phe Lys Lys
100 105 110

Tyr Ser

<210> 9
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<213> Arabidopsis thaliana

<400> 9

Val Arg Glu Glu Asp Ile Glu Val Ile Trp Val Pro Gly Ser Phe Glu
1 5 10 15

Ile Gly Val Val Ala Gln Asn Leu Gly Lys Ser Gly Lys Phe His Ala
20 25 30

Val Leu Cys Ile Gly Ala Val Ile Arg Gly Asp Thr Thr His Tyr Asp
35 40 45

Ala Val Ala Asn Ser Ala Ala Ser Gly Val Leu Ser Ala Ser Ile Asn
50 55 60

Ser Gly Val Pro Cys Ile Phe Gly Val Leu Thr Cys Glu Asp Met Asp
65 70 75 80

Gln Gln Ala Leu Asn Arg Ser Gly Gly Lys Ala Gly Asn Lys Gly Ala
85 90 95

Glu Thr Ala Leu Thr Ala Leu Glu Met Ala Ser Leu Phe Glu His His
100 105 110

Leu Lys

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<211> 156
<212> PRT
<213> Escherichia coli

<400> 10

Met Asn Ile Ile Glu Ala Asn Val Ala Thr Pro Asp Ala Arg Val Ala
 1 5 10 15

Ile Thr Ile Ala Arg Phe Asn Asn Phe Ile Asn Asp Ser Leu Leu Glu
 20 25 30

Gly Ala Ile Asp Ala Leu Lys Arg Ile Gly Gln Val Lys Asp Glu Asn
 35 40 45

Ile Thr Val Val Trp Val Pro Gly Ala Tyr Glu Leu Pro Leu Ala Ala
 50 55 60

Gly Ala Leu Ala Lys Thr Gly Lys Tyr Asp Ala Val Ile Ala Leu Gly
 65 70 75 80

Thr Val Ile Arg Gly Gly Thr Ala His Phe Glu Tyr Val Ala Gly Gly
 85 90 95

Ala Ser Asn Gly Leu Ala His Val Ala Gln Asp Ser Glu Ile Pro Val
 100 105 110

Ala Phe Gly Val Leu Thr Thr Glu Ser Ile Glu Gln Ala Ile Glu Arg
 115 120 125

Ala Gly Thr Lys Ala Gly Asn Lys Gly Ala Glu Ala Ala Leu Thr Ala
 130 135 140

Leu Glu Met Ile Asn Val Leu Lys Ala Ile Lys Ala
 145 150 155

<210> 11
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 <212> PRT
 <213> Bacillus subtilis

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Met Asn Ile Ile Gln Gly Asn Leu Val Gly Thr Gly Leu Lys Ile Gly
 1 5 10 15

Ile Val Val Gly Arg Phe Asn Asp Phe Ile Thr Ser Lys Leu Leu Ser
 20 25 30

Gly Ala Glu Asp Ala Leu Leu Arg His Gly
 35 40

<210> 12
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 <212> PRT
 <213> Bacillus subtilis

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Val Asp Thr Asn Asp Ile Asp Val Ala Trp Val Pro Gly Ala Phe Glu
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Ile Pro Phe Ala Ala Lys Lys Met Ala Glu Thr Lys Lys Tyr Asp Ala
 20 25 30

Ile Ile Thr Leu Gly Thr Val Ile Arg Gly Ala Thr Thr His Tyr Asp
 35 40 45

Tyr Val Cys Asn Glu Ala Ala Lys Gly Ile Ala Gln Ala Ala Asn Thr
 50 55 60

Thr Gly Val Pro Val Ile Phe Gly Ile Val Thr Thr Glu Asn Ile Glu
 65 70 75 80

Gln Ala Ile Glu Arg Ala Gly Thr Lys Ala Gly Asn Lys Gly Val Asp
 85 90 95

Cys Ala Val Ser Ala Ile Glu Met Ala Asn Leu Asn Arg Ser Phe Glu
 100 105 110